

Point of Care System (POC) in the Pediatric Intensive Care Unit (PICU)

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Introduction: We recently installed a computerized POC system in our PICU. It was implemented with the nursing, laboratory and respiratory care staff being the initial personnel documenting care on the system. In addition, physiologic data from cardiorespiratory monitors were automatically logged into the system.

Methods: The impact of a computerized POC in our PICU was evaluated. Prior to and following implementation of the POC, a time study involving nursing care, medication delivery, and laboratory test normalization was performed. In addition, an evaluation of completeness of documentation and a clinician survey of shift to shift reporting were also completed.

Results: The nursing time study demonstrated no difference in nursing time devoted to direct patient care or charting. The medication delivery time study showed an increase in delayed medication deliveries with the POC which was a result of improved accuracy (better data) of documentation of the POC and not caused by the system. The laboratory normalization time study showed no difference between the before POC time period and the POC time period, however, screen announcement of the abnormal values had not been implemented. Both the medication and the laboratory audits were found to be easier with the POC. The documentation evaluation showed that in all areas the documentation was superior with the POC when compared

with the paper chart. The electronic documentation was better both in content and legibility. The survey of clinicians of shift to shift reporting showed improvement ($p < 0.02$) following the implementation of the POC.

Conclusions: Our evaluation of the implementation of a POC in a PICU demonstrated that the POC required no increase in charting time by the nursing staff, the nursing documentation with the POC was legible and more complete than the paper system, and computerized POC provided more data with better accessibility and greater accuracy than the paper chart. In addition, we noted:

- 1) improved management functions of our nurse manager including an increased span of control, better incident report documentation, and improved employee development;
- 2) improved JCAHO documentation compliance;
- 3) enhanced physician practice through automated clinical calculations, physiologic parameter comparison, use during code situations and the availability of most of the clinical data on line;
- 4) a marked decrease in time and resources need to perform audits using the decision support module of the POC.

The cost of the system if expanded to all our critical care beds would be \$24/patient day if amortized over 3 years. The POC was a positive addition to our clinical tools.